#### How to Sell

# Intel<sup>®</sup> Xeon<sup>®</sup> W-3300 Processors



Built for advanced workstation professionals, Intel<sup>®</sup> Xeon<sup>®</sup> W-3300 processors offer uncompromised performance, expanded platform capabilities, and enterprise-grade security and reliability in a single-socket solution.

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But how do we sell these processors to our customers? It depends on their pain points and what conversations they're having with you. We've broken out some common conversation threads below, with relevant talking points and supporting evidence you can use.

#### Are they talking about...



See **page 5** for more about the exciting new technologies that are enabled in these processors.

See page 6 for how to help people understand why Intel products and partners are trusted to just work.

If you want more details on any of the products or technologies mentioned in this deck, please visit Intel® Partner Alliance! There you can find more sales resources including cards, briefs, and training.

- Performance varies by use, configuration, and other factors. Learn more at www.intel.com/PerformanceIndex. Performance results are based on testing as of dates shown in configurations and may not reflect all publicly available updates. See backup for configuration details. No product or component can be absolutely secure. Altering clock frequency or voltage may void any product warranties and reduce stability, security, performance, and life of the processor and other components. Check with system and component
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# Performance Conversations

#### **New Core Architecture**

Intel's new core architecture means Intel® Xeon® W-3300 processors represent a new era in computer performance and efficiency.

Intel<sup>®</sup> Xeon<sup>®</sup> W-3300 processors are intelligently engineered to push the boundaries of performance, with a new processor core architecture that transforms what your customers can accomplish on a workstation.<sup>P,1</sup>

### **Enhanced Deep** Learning Performance<sup>2</sup>

Intel® Deep Learning Boost (formerly known as VNNI) significantly accelerates inference performance for deep learning workloads optimized to use VNNI, with up to 3X average inference performance gains while using INT8 operations versus FP32 operations.<sup>2</sup>

## **Built for Expert Workloads**

Intel® Xeon® W-3300 processors are designed for the most demanding tasks, with increased core counts and caches, advanced accelerators, and large potential memory spans.

- Up to 38 cores
- Up to 1.5MB cache per core
- Up to 4.0 GHz with Intel<sup>®</sup> Turbo Boost Technology 2.0
- Up to 4TB DDR4-3200 8-channel memory support<sup>o</sup>
- Intel<sup>®</sup> AVX-512 instruction support

er Pro 3975WX Process Up to 27%

> Faster Product Development Workloads<sup>6</sup>

ssor SAMD er Pro 3955WX Process





See source and performance disclaimers in Notices & Disclaimers for details. See backup for workloads and configurations. Results may vary. IPC = Instructions Per Cycle/Clock and represents how many tasks a CPU can complete in each cycle. Up to 4TB of total system memory support using LRDIMM. Intel® Xeon® W-3300 processors support both RDIMM and LRDIMM memory.

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2D & Entry 3D CAD **Game Development Media Production Media Editing** 

#### **Advanced Content** Creation Advanced 3D & Rendering Small Al Workloads

#### **8K Video Editing**

Large Machine Learning & **Data Science Workloads** 



## Mobile & Entry Workstations

- Intel<sup>®</sup> Xeon<sup>®</sup> W-1300 Processors
- Intel<sup>®</sup> Xeon<sup>®</sup> W-1300M Processors



#### Mainstream Workstations

Intel<sup>®</sup> Xeon<sup>®</sup> W-2000 Processors



### Expert Workstations

- Intel<sup>®</sup> Xeon<sup>®</sup> W-3000 Processors
- Intel<sup>®</sup> Xeon<sup>®</sup> Scalable Processors

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#### Fault Tolerance & Management

When productivity loss from system downtime could cost thousands or even millions, you want technology to help reliably avoid, diagnose, and repair system level faults. That's why Intel<sup>®</sup> Xeon<sup>®</sup> W-3300 processors come with RAS technologies like (but not limited to):

- DDR4 Command/Address Parity Check and Retry
- Out-of-band access to error logs
- PCIe Card Hot Plug (add/remove/swap)
- Predictive Failure Analysis

#### **Security and Protection**

ECC Memory Support Augments system memory to detect and correct errors and ensure the integrity of essential data without interruption of workflow.

This technology helps prevent 99% of soft memory errors, such as unintended bit flips.<sup>4</sup>

- 4 See source and performance disclaimers in Notices & Disclaimers for details. For workloads and configurations visit www.Intel.com/PerformanceIndex. Results may vary.
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# Novelty Conversations

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What's new? It's really compelling for sales leads, which is why we're listing just a few of the most exciting new and expanded technologies in Intel® Xeon® W-3300 processors, along with a short description and a link to where you can learn more about them and many others.

NEW Core Architecture	A new core architecture providing IPC performance improvements. <sup>1, P</sup>
NEW Intel® Optane™ SSD P5800X Support	The next-generation Intel® Optane™ SSD P5800X/P5801X provides the performance needed to support your most data-intensive workloads.*
NEW <u>Discrete Intel® Wi-Fi 6E support</u>	Enable the fastest wireless speeds for PCs, gaining more responsive performance with enhanced security and reliability. <sup>5</sup>
Error-Correcting Code (ECC) Memory support	Augment system memory to detect and correct errors, ensuring the integrity of essential data without interruption of workflow.
Intel® Deep Learning Boost (VNNI) <sup>2</sup>	Accelerates AI inference—vastly improving performance for deep learning workloads. <sup>2</sup>

1,2,5 See source and performance disclaimers in Notices & Disclaimers for details. For workloads and configurations visit www.Intel.com/PerformanceIndex. Results may vary.
P IPC = Instructions Per Cycle/Clock and represents how many tasks a CPU can complete in each cycle.
\* Intel® Optane™ memory requires specific hardware and software configuration. Visit intel.com/OptaneMemory for configuration requirements.

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Intel's immense ecosystem of hardware and software partners means that the world builds their products to work well with Intel. Our leadership with standards, certifications, and validation programs means that hardware, software, and OS developers work with Intel to help your customers avoid compatibility issues.

1 Projection versus previous generation.

- 2 Intel® Deep Learning Boost <sup>1</sup>Up To 3x Average Inference Performance Gains<sup>1</sup>: As measured by the geomean across multiple deep learning framework workloads (Apache MXNet, TensorFlow, PyTorch, and Caffe). Results for Intel® Xeon® W-3300 processors have been estimated based on measured data comparing dual-socket Intel® Xeon® Platinum 8280 processor using 8-bit integer operations with Intel® Deep Learning Boost on ResNet-50 versus dual-socket Intel® Xeon® Platinum 8180 processor using 32-bit floating point operations. Test done by Intel as of 3/1/2019.
- All SKUs, frequencies, and performance estimates are preliminary and can change without notice.
- Source: X. Li, M. Huang, K. Shen, and L. Chu. "A Realistic Evaluation of Memory Hardware Errors and Software System Susceptibility" https://www.cs.rochester.edu/~kshen/papers/usenix2010-li.pdf.
- Select features only available certain SKUs. Check with manufacturer for details. For more Wi-Fi information please visit intel.com/wifi6disclaimers. Intel Wi-Fi 6: Intel® Wi-Fi 6 (Gig+) products support optional 160 MHz channels, enabling the fastest possible theoretical maximum speeds (2402 Mbps) for typical 2x2 802.11 AX PC Wi-Fi products. Premium Intel® Wi-Fi 6 (Gig+) products enable 2-4X faster maximum theoretical speeds compared standard 2x2 (1201 Mbps) or 1x1 (600 Mbps) 802.11 AX PC Wi-Fi products, which only support the mandatory requirement of 80 MHz channels.
- Based on SPECworkstation 3 v3.1 Product Development score results on Intel® Xeon® W-3365 processor vs. AMD Threadripper Pro 3975WX processor. Performance results are based on results as of 05/20/2021 and may not reflect all publicly available updates. See configuration disclosure for details. No product can be absolutely secure. See Appendix for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/benchmarks.
- Based on SPECworkstation 3 v3.1 Energy score results on Intel<sup>®</sup> Xeon<sup>®</sup> W-3335 processor vs. AMD Threadripper Pro 3955WX processor. Performance results are based on results as of 05/20/2021 and may not reflect all publicly available updates. See configuration disclosure for details. No product can be absolutely secure. See Appendix for configuration details. For more complete information about performance and benchmark results, visit www.intel.com/benchmarks.
- Based on SPECworkstation 3 v3.1 General Operations score results on Intel® Xeon® W-3335 processor vs. AMD Threadripper Pro 3955WX processor. Performance results are based on results as of 05/20/2021 and may not reflect all publicly available updates. See configuration disclosure for details. No product can be absolutely secure. For more complete information about performance and benchmark results, visit www.intel.com/benchmarks

#### Configurations

SPECworkstation 3 v3.1 performance measured on platforms with: Intel<sup>®</sup> Xeon<sup>®</sup> W-3365 processor, PL<sup>1</sup>= 270W TDP, 32C/64T, Turbo up to 4.0GHz, Motherboard Name: Gigabyte MU72-SUO (C621A), Motherboard type: Pre-Production, BIOS: D07 Graphics: Nvidia Quadro RTX4000, Gfx version: 461.40, Memory: 128GB (8x16GB) DDR4-3200MHz ECC RDIMMs, Storage: 1TB Samsung 980 Pro, OS: Microsoft Windows<sup>®</sup> 10 Pro, Build Version 20H2 (19042.630), CPU Cooler: Liquid Cooling, EKWB-PRO LGA4189 1S Validation Kit.

VERSUS AND Threadripper Pro 3975WX, 32C/64T, TDP: 280W, Turbo up to 4.2GHz, System: Lenovo P620, Graphics: Nvidia Quadro RTX4000, Gfx version: 452.57, Memory: 8x8GB (DDR4-3200MHz) ECC RDIMM, Storage: 1TB Samsung 970 EVO Plus SSD, OS: Microsoft Windows\* 10 Pro (Build 19042.630) 20H2, CPU Cooler: Air Cooler: Lenovo P620.

SPECworkstation 3 v3.1 performance measured on platforms with: Intel\* Xeon\* W-3335 processor, PL1= 270W TDP, 16C/32T, Turbo up to 4.0GHz, Motherboard Name: Gigabyte MU72-SUO (C621A), Motherboard type: Pre-Production, BIOS: D07 Graphics: Nvidia Quadro RTX4000, Gfx version: 461.40, Memory: 128GB (8x16GB) DDR4-3200MHz ECC RDIMMs, Storage: 1TB Samsung 980 Pro, OS: Microsoft Windows\* 10 Pro, Build Version 20H2 (19042.630), CPU Cooler: Liquid Cooling, EKWB-PRO LGA4189 1S Validation Kit.

#### VERSUS

AMD Threadripper Pro 3955WX,16C/32T, TDP: 280W, Turbo up to 4.4GHz, System: Lenovo P620, Graphics: Nvidia Quadro RTX4000, Gfx version: 452.57, Memory: 8x8GB (DDR4-3200MHz) ECC RDIMM, Storage: 1TB Samsung 970 EVO Plus SSD, OS: Microsoft Windows\* 10 Pro (Build 19042.630) 20H2, CPU Cooler: Air Cooler: Lenovo P620.

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